A NEW POLYEMBRYONIC PARASITE OF THE PEPPER MOTH (HYMENOPTERA: ENCYRTIDAE)

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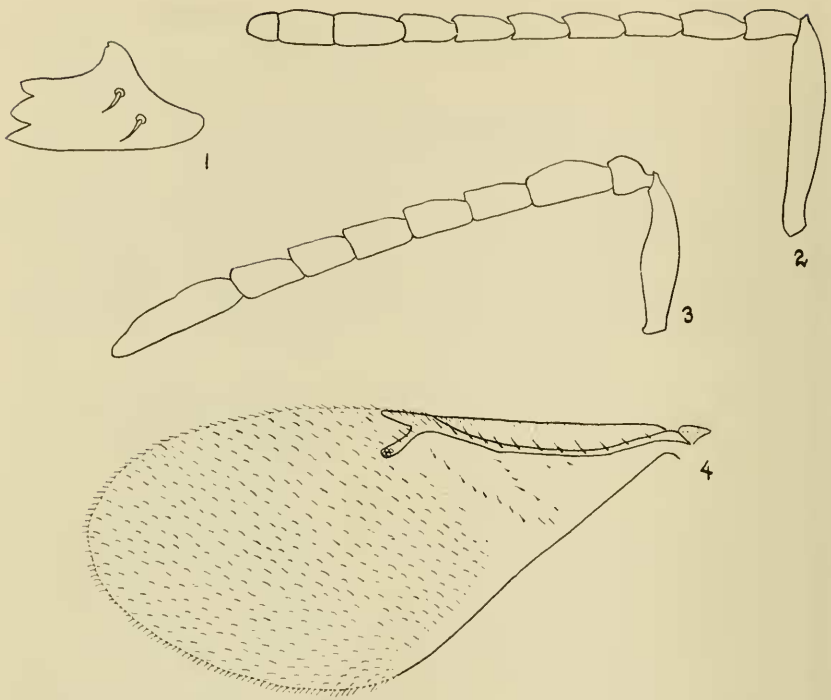
I am describing the following species of *Copidosoma* to make its name available for use in biological control investigations that are at present being conducted in the West Indies. It is a primary, polyembryonic parasite that attacks the larva of the pepper moth, *Gnorimoschema capsicum* Bradley and Povolný, in Trinidad and Puerto Rico.

There is at present little uniformity in the application of the generic name *Copidosoma* Ratzeburg. The usage by Peck *in* Muesebeck *et al.* (1951) or in his later catalog (1963) shows the widest possible application of the name. In his treatment, *Copidosoma* has a lengthy synonymy, including *Litomastix* Thomson, *Berecyntisus* Ghesquière (= *Berecyntus* Howard), *Neocopidosoma* Ishii, *Arrenoclavus* Doutt, and several others that have appeared in the literature very little. The characterization by Hoffer *in* Kratochvíl (1957), in which *Copidosoma* and *Litomastix* are recognized as distinct and the other genera just listed are not considered, probably represents the concept of *Copidosoma* that is accepted by most contemporary workers on Chalcidoidea. De Santis (1963), however, uses *Copidosoma* in a more restricted sense, employing the subgenera *Verdunia* Mercet and *Copidosoma s.s.* under *Copidosoma*, and maintaining *Litomastix* and *Arrenoclavus* as distinct genera.

In order that the relationships of the species I am describing here may be evident, I should make it clear how I am employing the name *Copidosoma*. This species has an exserted ovipositor, the gaster is bilaterally compressed, and the antennal club is apically rounded. It will, thus, run to *Copidosoma* in Mercet's key (1921) and to *Copidosoma s.s.* in De Santis's key (1963). There are, however, authentically determined European specimens of *C. boucheanum* Ratzeburg, the type-species of *Copidosoma*, in the U. S. National Museum collection, and when I compared this species with them, I found it difficult to believe that the two were congeneric. On the other hand, the National Museum collection also contains authentic material of the type-species of almost all the other genera listed by Peck as synonyms of *Copidosoma*, and all of them agree less well with this species than does *boucheanum*. Clearly, as the classification now stands, this species is a typical *Copidosoma*, although not at all closely related to the type-species.



Figs. 1–4. *Copidosoma capsicum*, n. sp. Fig. 1, mandible; fig. 2, antenna of ♀; fig. 3, antenna of ♂; fig. 4, forewing of ♀.

Copidosoma capsicum, new species

Female.—Length, 1.25 mm. Head dark metallic green or blue-green; mesoscutum black anteriorly, shading to bright green, clothed with sub-appressed, silvery hairs; scutellum dark green; propodeum and gaster smooth, shining green; antennal scape black, pedicel and flagellum brown; wings hyaline, marginal and postmarginal veins darkened; anterior legs, including coxae, white; middle and hind coxae black, apical third to half of each hind femur black, legs otherwise white.

Length of malar space half eye height; ocellocular line one-half diameter of lateral ocellus; apex of scrobe cavity slightly above center of frons and apical margin of scrobe cavity not sharp; eyes not hairy; mandible with three teeth, ventral one slightly the longest and acute, middle one broad and relatively blunt, dorsal tooth smallest, fig. 1. All funicular segments of antenna longer than broad, club broader than funiculus, rounded at apex, and as long as basal two funicular segments, fig. 2.

Mesoscutum almost smooth, very faintly sculptured; tegulae shagreened; forewing, fig. 4, with marginal and postmarginal veins broadened, stigmal vein as long as the two combined; scutellum with longitudinal, lineolate sculpture, this tending to converge basally and apically.

Propodeum and gaster smooth, shining; gaster as long as thorax, compressed in

apical half, ovipositor sheaths flattened and exserted for a distance as great as half the length of the gaster; apical gastral sterna exserted, keel-like.

Male.—Length, 1.00 mm. Head bright green; antennal scape and flagellum tan; color otherwise as in female. Antenna, fig. 3, with sub-serrate funiculus.

The distinctive color pattern of this species, with white anterior coxae and the apical half of the hind femur black, should set it apart from all other known species of *Copidosoma*. There is at present only one Neotropical species of *Copidosoma s.s.* This is *hyalinistigma* De Santis (1963). It has a much shorter postmarginal vein and first funicular segment than does *capsicum*.

Type locality.—Curepe, Trinidad, W. I.

Type.—U.S.N.M. No. 69067.

Described from 68 female and 47 male specimens, as follows: Type female, allotype ♂, and 11 ♀, 1 ♂ paratypes, Curepe, Trinidad, W. I., Jan. 1966, reared from *Gnorimoschema capsicum* in pepper pods, F. D. Bennett; 46 ♀, 32 ♂ paratypes, same data, but Dec. 1965; 10 ♀, 13 ♂ paratypes, Rio Piedras, Puerto Rico, 1940, reared from *Gnorimoschema* sp. in pepper, F. Seín. Numerous additional specimens, not included in the type series, from both Trinidad and Puerto Rico.

References

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A NEW SYNONYMY IN THE TRICHOPTERA

Through the courtesy of S. G. Jewett, Jr., I have had the opportunity to study a series of two males and two females of the caddisfly commonly identified as *Dicosmoecus aureoventris* Davis. The females were carefully compared to figures and notes I had made of the female type of *Drusinus frontalis* Banks, with the result that the following synonymy became apparent:

Dicosmoecus frontalis (Banks)

Drusinus frontalis Banks, 1943, Bull. M.C.Z., 92: 350–351. Ross, 1944, Bull. Ill. Nat. Hist. Surv. 23(art. 1): 300.

Dicosmoecus aureoventris Davis, 1949, Ann. Ent. Soc. Amer. 52: 449–450. Schmid, 1955, Mitt. Schweiz. Ent. Ges. 28: 36. **New Synonymy.**

Pseudostenophylax frontalis; Schmid, 1955, Mitt. Schweiz. Ent. Ges. 28: 112.

Dicosmoecus frontalis; Flint, 1966, Proc. U. S. Nat. Mus., 118: 378.

The species is known from Washington (Mt. Adams, Mt. Ranier, Sherman Pass Ferry Co.) and British Columbia (Terrace).—Oliver S. Flint, Jr., *Department of Entomology, Smithsonian Institution, Washington, D. C., 20560.*